(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 16 September 2004 (16.09.2004)

PCT

(10) International Publication Number WO 2004/079439 A3

G02F 1/1347 (51) International Patent Classification7:

(21) International Application Number:

PCT/JP2004/002931

5 March 2004 (05.03.2004) (22) International Filing Date:

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2003-058561

5 March 2003 (05.03.2003)

(71) Applicant (for all designated States except US): CANON KABUSHIKI KAISHA [JP/JP]; 3-30-2, Shimomaruko, Ohta-ku, Tokyo, 1468501 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): YUASA, Satoshi, [JP/JP]; C/o Canon Kabushiki Kaisha 3-30-2, Shimomaruko, Ohta-ku, Tokyo, 1468501 (JP).

(74) Agents: OKABE, Masao, et al.; No. 602, Fuji Bldg.,, 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo 1000005 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

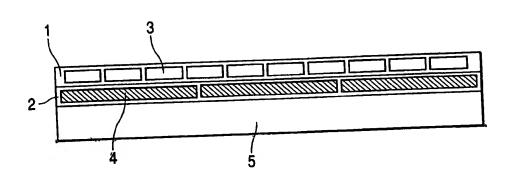
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 24 February 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COLOR IMAGE DISPLAY PANEL AND DRIVING METHOD THEREOF



(57) Abstract: An image display panel having, in a multilayer structure, a first (1) and second light (2) modulating layers each comprising a periodical planar arrangement of a plurality of light modulating elements (3, 4) for modulating a color or a brightness of an incident light in response to an input signal, wherein the arrangement period of the light modulating element in the first light modulating layer (3) is smaller than the arrangement period of the light modulating element in the second light modulating layer (4).





A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G02F1/1347

According to International Patent Classification (IPC) or to both national classification and IPC

 $\begin{array}{ccc} \text{Minimum documentation searched} & \text{(classification system followed by classification symbols)} \\ \text{IPC 7} & \text{G02F} & \text{H04N} \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC, COMPENDEX, MEDLINE

C. DOCUM	ENTS CONSIDERED TO BE RELEVANT	Relevant to claim No.
Category °	where appropriate, of the televant	
X Y X	EP 0 347 790 A (HONEYWELL INC) 27 December 1989 (1989-12-27) column 1, line 50 - column 2, line 8 column 3, line 21 - line 48 column 5, line 27 - line 46 column 7, line 32 - column 8, line 35 figures 1A,6,10,11 EP 0 579 382 A (XEROX CORP) 19 January 1994 (1994-01-19) column 3, line 8 - line 26 column 4, line 33 - column 6, line 19 column 11, line 5 - line 28 claims 1,3 figures 1,4	1-3,6,7, 9,11 4,5,8,10 1,2,6,7, 9,11
X	19 January 1994 (1994-01-19) column 3, line 8 - line 26 column 4, line 33 - column 6, line 19 column 11, line 5 - line 28 claims 1,3	

Further documents are listed in the continuation of box C. Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is clied to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but	Patent family members are listed in annex. "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skited in the art. "8" document member of the same patent family
bate of the actual completion of the international search	Date of mailing of the international search report 2 8. 12. 04
25 May 2004	Authorized officer
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Girardin, F



	INTERNAL OF ALCOLATION	PCT/JP2004/0029	· · · · · · · · · · · · · · · · · · ·
.(Continua	ntion) DOCUMENTS CONSIDERED TO BE RELEVANT	Relevant to	o claim No.
ategory °	Citation of document, with indication, where appropriate, of the relavant passages		
(DATABASE MEDLINE 'Online!	4,	5,8,10
	MULLEN K T: "The contrast sensitivity of mullen k T: "sign to red-green and		
	blue-yellow chromatic gratings." XP002281432 Database accession no. NLM3999044		
	abstract & THE JOURNAL OF PHYSIOLOGY. ENGLAND FEB		
	1985, vol. 359, February 1985 (1985-02), pages 381-400, ISSN: 0022-3751		
A	TR 0 151 846 A (TBM UK ; IBM (US))	:	1,11
	21 August 1985 (1985-08-21) page 9, line 5 - page 10, line 3 figure 1		
,			
3			



INTERNATIONAL SEARCH REPORT

mational application No. PCT/JP2004/002931

INTERNATIONAL SEARCH REPORT	
Box II Observations where certain claims were found unsearchable (Contin	uation of item 2 of first sheet)
Box II Observations where certain claims were found unsearchasts (
This international Search Report has not been established in respect of certain daims under	r Article 17(2)(a) for the following reasons:
Claims Nos.: because they relate to subject matter not required to be searched by this Authority	, namely:
Claims Nos.: because they relate to parts of the International Application that do not comply where they relate to parts of the International Search can be carried out, specifically an extent that no meaningful International Search.	ith the prescribed requirements to such :
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the	
Box III Observations where unity of invention is lacking (Continuation of	item 3 of first sneet)
This International Searching Authority found multiple inventions in this international appli	lication, as follows:
see additional sheet	
As all required additional search fees were timely paid by the applicant, this is searchable claims.	<u> </u>
As all searchable claims could be searched without effort justifying an addition of any additional fee.	onal fee, this Authority did not invite payment
As only some of the required additional search fees were timely paid by the covers only those claims for which fees were paid, specifically claims Nos.:	applicant, this International Search Report
4. No required additional search fees were timely paid by the applicant. Conserved to the invention first mentioned in the claims; it is covered by claims. 1–11	sequently, this international Search Report is time Nos.:
Remark on Protest	th fees were accompanied by the applicant's protest.



Inte	
PCT/JP2004/00293	31

	T	Publication		Patent family		Publication date	
Patent document cited in search report	1040		member(s)				
EP 0347790	A	27-12-1989	US CA DE DE EP ES JP JP	4886343 1331408 68913084 68913084 0347790 2050188 2110430 2797199	D1 T2 A2 T3 A	12-12-1989 09-08-1994 24-03-1994 14-07-1994 27-12-1989 16-05-1994 23-04-1990 17-09-1998	
EP 0579382	A	19-01-1994	DE DE EP JP JP US	69316673 69316673 0579382 3329887 6123893 5642125	T2 A1 B2 A	05-03-1998 23-07-1998 19-01-1994 30-09-2002 06-05-1994 24-06-1997	
EP 0151846	A	21-08-1985	EP CA DE JP JP JP US	0151846 1229438 346681 159680 202295 6017209 472582	8 A1 7 D1 7 C 6 B 2 A	21-08-1985 17-11-1987 19-11-1987 28-01-1991 22-05-1990 05-09-1985 16-02-1988	